CLAIMS

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1.   A method of transmitting traffic from a plurality of users having respective service types over an ATM virtual circuit connection, the method including storing in a look-up table information for each said user comprising a service type indicator, a circuit identifier and a cell length

10   indicator for that user, segmenting each user's traffic and packaging the segmented user traffic into minicells, multiplexing the minicells from a plurality of users into ATM cells each ATM cell having a header incorporating a connection identifier field, entering in said connection

15   identifier field the respective circuit identifier for each said user, transmitting the ATM cells over the connection, determining from the look-up table for each said user the service type and the length of the minicells associated with that user whereby to effect delineation of the minicells contained in each said ATM cell, and de-multiplexing the delineated minicells whereby

20   to recover each user traffic.

2.   A method as claimed in claim 1, wherein a plurality of virtual channels are configured on the same link.

25   3.   A method as claimed in claim 2, wherein said stored information is derived from information transmitted in a service specific field.

4.   A method as claimed in claim 1   , wherein a sequence number is provided for each minicell.

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5.   A method as claimed in claim 4, wherein said sequence number is contained in a minicell pointer.

6.   A method as claimed in claim 5, wherein a minicell pointer is

35   provided in every minicell.

7.   A method as claimed in claim 5, wherein omission or corruption of minicells in a sequence is detected and said omitted or corrupted minicells are selectively retransmitted.

5   8.   A method as claimed in claim 1   , wherein a sequence number is provided for each ATM cell

9.   A method as claimed in claim 8, wherein said ATM sequence number is defined by a single bit.

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10.   A method as claimed in   claim 1   . wherein at least some said user service types are allocated variable length minicells, and wherein said stored user information is updated with the current cell length.

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